## REMARKS

Reconsideration of this application, as amended, is respectfully requested.

Claims 45-47, 50, 51, 61-63, 65-67 and 70-72 are pending. Claims 45-47, 50, 51, 61-63, 65-67 and 70-72 stand rejected.

Claims 45 and 72 have been amended. Support for the amendments is found in the specification, the drawings, and in the claims as originally filed. Applicants submit that the amendments do not add new matter.

## Rejections Under 35 U.S.C. § 103(a)

Claims 45-47, 50, 61-63, 65-67 and 70-72 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,149,727of Yoshioka, et al. ("Yoshioka") in view of U.S. Patent No. 6,120,660 of Chu, et al. ("Chu") and further in view of Japanese Patent No. 10321545 of Shusaku Yanagawa ("Yanagawa") as evidenced by U. S. Patent No. 5,647,953 of Williams, et al. ("Williams"). The Examiner has stated

> Yoshioka et al disclose a process chamber comprising a media delivery member (Fig 1-9), a spin chuck (Fig 1-20) and a plurality of point contact support structures (Fig 2 and Fig 3-27) and vacuum ring (Fig 2-24).
>
> Yoshioka et al do not disclose a coating layer of silicon oxide on the spin chuck.
>
> Chu et al disclose a susceptor coated by a silicon-bearing compound (Col 6 lines 48-60) like silicon dioxide (Col 12 claim 5). The thickness of the coating is disclosed to be 0.5-2.0 micron (Col 7 lines 18-19). Chu et al also teach that a silicon-bearing compound for protective lay is especially useful when a silicon substrate is used (Col 6 line 67).

(p. 2, Office Action 5/18/04)

Chu discloses

> In a specific embodiment, the present system includes a novel susceptor design 82 using a silicon coating 205. The silicon coating 205 is defined on substantially all surfaces, including top, sides, and bottom, of the susceptor 82, which holds silicon wafer 201. The silicon coating includes a silicon bearing compound. In most embodiments, the silicon

> coating is desirable in a process using silicon wafers or the like. The coating can be made of any suitable material that is sufficiently resistant to implantation and temperature influences. As merely an example, the silicon coating can be an amorphous silicon layer, a crystalline silicon, or a polysilicon thickness for providing protection or isolating the base susceptor material 211, as shown in FIG. 2A, for example.

(Col. 6, lines 48-60)

> Since the coating is made of the same or similar material as...

(Col. 6, line 67)

> The silicon coating is often about 0.5 micrometers to about 2.0 micrometers or thicker, depending upon the embodiment.

(Col. 7, lines 18-19)

> The system of claim 1 wherein said silicon coated susceptor has a coating selected from silicon dioxide, quartz, polysilicon, amorphous silicon, or crystalline silicon.

(Col. 12, claim 5)

Applicants respectfully submit, however, that new claim 45 is not obvious under 35 U.S.C. § 103 in view of Yoshioka, Chu, Yanagawa and Williams. Claim 45 includes the following limitations.

> An apparatus for delivering media to a wafer, comprising:
> a housing defining a process chamber;
> a spin chuck positioned in the process chamber, the spin chuck having a wafer support surface, the wafer support surface coated with a coating layer such that at least a portion of a particulate matter on the wafer support surface is encapsulated by the coating layer; and
> a skirt positioned at a periphery and in a non-planar relationship to the wafer support surface such that a magnitude of radial thermal gradients in a wafer positioned on the spin chuck is reduced, wherein a lateral edge of the wafer support surface.

(Amended claim 45) (emphasis added).

In contrast, none of Yoshioka, Chu, Yanagawa or Williams, alone or in combination disclose these limitations.

The Examiner is relying on Yanagawa to provide the limitation of the skirt as claimed. The Examiner has stated that

"Yanagawa discloses a skirt for thermal shielding around the periphery of the wafer support surface..."

(Office action mailed May 18, 2004, pg. 3, para. 2)

However, a thorough reading of the Yanagawa abstract and inspection of figures 1-6, reveals that the skirt is not described as being at the periphery of the wafer support surface. Rather, the rings in Yanagawa are described as shielding a peripheral portion of the substrate. Nowhere does Yanagawa disclose a skirt positioned at a periphery of a wafer support surface, and in fact the description and figures of Yanagawa show clearly that the rings (specifically ring 6) is not positioned at the periphery of the wafer support surface.

Applicants have amended claim 45 to clarify this distinction. As claimed, a lateral edge of the skirt is in contact with a lateral edge of the wafer support surface. This is in contrast to Yanagawa (see Yanagawa, figure 1).

For these reasons, applicants respectfully submit that claim 45, as amended, is not rendered obvious by the cited references, alone or in combination.

Given that claims 46, 47, 50, 51, 61 – 63, and 65 – 67 depend, directly or indirectly from claim 45, applicants respectfully submit that claims 46, 47, 50, 51, 61 – 63, and 65 – 67 are, likewise, not rendered obvious by the cited references, alone or in combination.

Applicants respectfully submit that claim 70 is not anticipated or rendered obvious by any of the cited references, alone or in combination. Claim 70 includes the following limitations

> An apparatus for delivering media to a wafer, comprising:
> a housing defining a process chamber; and
> a spin chuck positioned in the process chamber, the spin chuck having a wafer support surface, the wafer support surface coated with a coating layer such that at least a portion of a particulate matter on the wafer support surface is encapsulated by the coating layer, and wherein the wafer support surface includes a line contact vacuum ring.

(Claim 70) (Emphasis added)

Applicants respectfully submit that none of the cited references include a wafer support surface having a line contact vacuum ring as claimed, nor do any of the references, alone or in combination render such a limitation obvious. The "ring" of Yoshioka is an O ring fitted into a

circular groove (see figures 2 and 3 of Yoshioka), and cannot be equated with the line contact vacuum ring as claimed.

For this reason, applicants respectfully submit that new claim 70 is not anticipated or rendered obvious by any of the cited references, alone or in combination.

Given that claims 71 and 72 depend from claim 70, applicants submit that claims 71 and 72 are, likewise, not obvious under § 103 in view of the references cited by the Examiner.

Moreover, claim 72 is not rendered obvious by any of the cited references, alone or in combination for the reasons discussed above in reference to amended claim 45.

It is respectfully submitted that in view of the amendments and arguments set forth herein, the applicable rejections and objections have been overcome. If there are any additional charges, please charge Deposit Account No. 02-2666 for any fee deficiency that may be due.

Respectfully submitted,

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